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Clinical features of ocular surface inflammation in chronic graft versus host disease: A case series

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Chronic graft-versus-host disease (cGVHD) is a systemic inflammatory disease which often involves the ocular surface. It is unknown how ocular surface inflammation seen in the context of cGVHD may differ from other, more common types of ocular surface inflammation. The objective of this series was to compare the ocular surface clinical features of cGVHD patients (n=15) to a randomly selected group of patients with idiopathic dry eye without systemic disease or secondary cause (n=20). Results of ocular surface assessments performed on dry eye patients seen in the Singapore National Eye Centre were retrieved retrospectively from a clinical database. Mean age of cGVHD dry eye vs. idiopathic dry eye was 50.7 ± 12.1 vs. 54.2 ± 14.3 years, respectively ($p=0.4$), with 70% females overall. Schirmer-I test readings were lower in cGVHD patients than idiopathic dry eye patients (2.7 ± 2.8 mm vs. 11 ± 7.8 mm, respectively; $p < 0.001$). Corneal staining grading was significantly more severe in each of the 5 corneal zones in cGVHD patients (all $p < 0.01$). In the cGVHD patients, the most severe staining was observed in the inferior zone, followed by central, temporal and superior zones, with the nasal zone showing the least staining. No significant difference in fluorescein break-up time (2.7 ± 1.8 vs. 3.5 ± 1.5 s; $p=0.4$) was observed between the groups. Dry eye experienced by cGVHD patients is more severe than in idiopathic dry eye, manifesting as severe epitheliopathy detectable by corneal staining. Aqueous tear deficiency, as evidenced by low Schirmer readings, may be the main cause of severe dry eye in cGVHD.

Biography

Louis Tong graduated in 1993 from the National University of Singapore, registered as a medical practitioner in 1994 and achieved accreditation as an ophthalmologist by the Singapore Medical Council in November 2004. He completed training in Ophthalmology in United Kingdom (1996-2000) and in Singapore (2000-2004). He is currently head of ocular surface research group and co-head of ocular inflammation and immunology research groups at the Singapore Eye Research Institute (SERI). He is involved in advisory board meetings in several pharmaceutical companies and is a sub-committee member of international dry eye workshop II and a co-inventor in a few patents.

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